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| EXAMINER | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 10/675,869 | CAGNO ET AL. |
| | Examiner | Art Unit |
| | JAMES R. MARANDI | 2421 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *29 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/29/2003*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following minor informalities:

   1.1. Page 5, line 5, element 270 is identified as passive transponder reader. Line 11, refers to element 270 as communication link control card. This is appears to be a typographical error, as element 250 (containing 270) is the communication control card as per line 7.

   1.2. Page 12, sentence of lines 3-4 does not appear to be correct. The applicant may have intended to say "one or more bit errors" instead of "one or bit errors".

   Appropriate correction is required.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a) because:

   2.1. In Fig. 2, the relevance of elements 242, 244, 252, and 254 is unknown as they are not described in the disclosure

2.2. Fig. 3 (and/or other drawings) fails to show element 360 as described in the specification (page 5, lines 12-13, and page 6, lines 1-4). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d)

2.3. In Fig. 5, element 530, word "based" is misspelled.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 4- 10, 12-18, and 20-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over P. B. Gilliland et al., USPN 6,554,492 (hereinafter "Gilliland"), in view of Philips hitag1 stick transponder (hereinafter "hitag"). Philips hitag1 reference was provided by applicant in IDS of 9/29/2003

**4.1.** Regarding claim 1, Gilliland discloses **a method to provide a signal via a communication link** (GBIC link)**, comprising the steps of** (Col. 1, lines 10-60)**:**

**disposing a transponder on said communication link** (GBIC transponder)**, wherein said transponder includes a memory comprising information** (EEPROM, Col. 1, lines 48- 60)**;**

**reading said information from said memory** (information is accessed/read from EEPROM, as per GBIC specification, Col. 1, lines 48- 51); **and**

**adjusting the characteristics of said signal based upon said information** (by reading the specifications, Col. 1, lines 27- 30, the host system identifies the type of GBIC and adjust signals accordingly to accommodate various facilities/links, Col. 1, lines 10- 14).

Gilliland disclosure incorporates GBIC SFF-8053, GBIC Rev. 5.5 September 27, 2000, copy of which was provided by the applicant in the IDS of 9/29/2003. SFF-8053 further details the information/ tables outlining detailed information about the type of facilities, length, vendor, bit rates, etc. (see Appendix D. pages 43-52). For example, table D.1, Base ID fields indicating link length, vendor, and bit rate max and min.

Gilliland transponder (GBIC) though powered by the host (not including its own power source, and having passive circuitry as per SFF-8053, page 8, section 4.2) is not a **passive** transponder as defined by applicant (powered by RF source, page 6 of disclosure, lines 5-7).

However, hitag provides a **passive** transponder (powered by RF, page 2, col. 2, 1st and 2nd paragraphs), comprising an EEPROM memory (Page 2, Col. 1,

General Description), where the reader and transponder are enabled to securely communicate and identify each other (Page 2, Col. 2, 3rd paragraph), in a contactless fashion (Page 2, Col.2, Features).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland with hitag in order to replace the pin connectors (20 of them) of a GBIC with a contactless, easy to connect, contactless interface.

4.1.1. Regarding claim 2, Gilliland discloses **providing a communication link control card comprising a reading device** (connection to host system reader)**; interconnecting said communication link to said communication link control card** (communication link connecting to the host system via GBIC)**, such that said reading device** (in host system, Col. 1, lines 27-30) **is capable of reading said information from said memory** (EEPROM memory, Col. 1, lines 48- 51).

**4.1.2.** Regarding claim 4, the system of Gilliland and hitag discloses (Section 5.1 of SFF-8053 specification, page 11) **wherein said signal comprises an actual throughput rate and wherein said communication link comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field, further comprising the steps of:**

**encoding said nominal throughput rate in said throughput data field** (as shown in Table D.1, 6th row, Page 44 of the SFF-8053 specification)**;**

**reading said nominal throughput rate from said throughput data field** (the fields are encoded on the EEPROM and read by the host reader)**;**

**determining if said nominal throughput rate is greater than or equal to said actual throughput rate** (error detection process as described next)**;**

**operative if said nominal throughput rate is not greater than or equal to said actual throughput rate, generating an error message**. As disclosed in section 5.1 the transponder (GBIC) is driven from the host board with signals TX_DAT. The output from transponder (GBIC) to the host board is designated as RX_DAT. Any loss of signal, where the signal is not able to achieve the specified Bit Error Rate (BER), therefore throughput lower than an expected threshold, triggers RX_LOS. Signal deterioration at receiver and transmitter are monitored and acted upon through TX_FAULT

and RX_LOS. The system of Gilliland and hitag discloses that in such situation, the signals with high error rate will not be utilized. However, Gilliland and hitag is not explicit in issuing an error message (though error detection and management is further disclosed in sections E.3 and E.4 (page 54). Official notice is taken that it is well known in the art to issue an explicit error message upon encountering a fault, in order to indicate to the user and/or network administrator that the system is not performing as desired.

**4.1.3.** Regarding claim 5, the system of Gilliland and hitag discloses **wherein said communication link comprises a cable type** (communication link is a physical layer with identified types, for example copper or fiber connecting to the transponder/GBIC. Cable types are identified and reflected in Table D.1 of SFF-8053 standard)**, and wherein said passive transponder comprises a cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12)**, further comprising the steps of:**

**encoding said cable type in said cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12);

**reading said cable type from said cable identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader),

**providing a signal comprising said cable type** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

**4.1.4.** Regarding claim 6, the system of Gilliland and hitag discloses **the step of detecting the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.1.5.** Regarding claim 7, the system of Gilliland and hitag discloses **wherein said communication link comprises a version number** (Table D.1 of page 44 of SFF_8053 standard, row 18)**, and wherein said passive transponder comprises a version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**, further comprising the steps of:**

**encoding said version number in said version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**;**

**reading said version number from said version identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader)**, and**

**providing a signal comprising said version number** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

4.1.6. Regarding claim 8, the system of Gilliland and hitag discloses **the step of detecting the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.2.** Regarding claim 9, Gilliland discloses **an article of manufacture comprising a computer useable medium** (GBIC has an EEPROM containing information about the communication link as per Annex D of SFF-8053, Col. 1, lines 48- 60) **having computer readable program code disposed therein to provide a signal via a communication link** (GBIC link, interacts with host system in transporting the signal to the communication link it is connected to)**,** (also see Col. 1, lines 10- 60) **wherein said communication link includes a transponder** (GBIC transponder) **comprising a memory comprising**

**information** (EEPROM), **the computer readable program code comprising a series of computer readable program steps to effect:**

**reading said information from said memory** (information is accessed/read from EEPROM, as per GBIC specification, Col. 1, lines 48- 51); **and**

**adjusting the characteristics of said signal based upon said information** (by reading the specifications, Col. 1, lines 27- 30, the host system identifies the type of GBIC and adjust signals accordingly to accommodate various facilities/links, Col. 1, lines 10- 14).

Gilliland disclosure incorporates GBIC SFF-8053, GBIC Rev. 5.5 September 27, 2000, copy of which was provided by the applicant in the IDS of 9/29/2003. SFF-8053 further details the information/ tables outlining detailed information about the type of facilities, length, vendor, bit rates, etc. (see Appendix D. pages 43-52). For example, table D.1, Base ID fields indicating link length, vendor, and bit rate max and min.

Gilliland transponder (GBIC) though powered by the host (not including its own power source, and having passive circuitry as per SFF-8053, page 8, section 4.2) is not a **passive** transponder as defined by applicant (powered by RF source, page 6 of disclosure, lines 5-7).

However, hitag provides a **passive** transponder (powered by RF, page 2, col. 2, 1st and 2nd paragraphs), comprising an EEPROM memory (Page 2, Col. 1, General Description), where the reader and transponder are enabled to securely communicate and identify each other (Page 2, Col. 2, 3rd paragraph), in a contactless fashion (Page 2, Col.2, Features).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland with hitag in order to replace the pin connectors (20 of them) of a GBIC with a contactless, easy to connect, contactless interface.

4.2.1. Regarding claim 10, Gilliland discloses **a communication link control card comprising a reading device** (connection to host system reader), **where in said communication link is interconnected to said communication link control card** (communication link connecting to the host system via GBIC) **such that said reading device** (in host system, Col. 1, lines 27-30) **is capable of reading said information from said one or more data fields** (EEPROM memory, Col. 1, lines 48- 51; Data fields as reflected in Table D.1 of SFF-8053).

**4.2.2.** Regarding claim 12, the system of Gilliland and hitag discloses (Section 5.1 of SFF-8053 specification, page 11) **wherein said signal comprises an actual throughput rate and wherein said communication link comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field**(as shown in Table D.1, 6th row, Page 44 of the SFF-8053 specification)**, said computer readable program code further comprising a series of computer readable program steps to effect:**

**reading said nominal throughput rate from said throughput data field** (the fields are encoded on the EEPROM and read by the host reader)**;**

**determining if said nominal throughput rate is greater than or equal to said actual throughput rate** (error detection process as described next)**;**

**operative if said nominal throughput rate is not greater than or equal to said actual throughput rate, generating an error message**. As disclosed in section 5.1 the transponder (GBIC) is driven from the host board with signals TX_DAT. The output from transponder (GBIC) to the host board is designated as RX_DAT. Any loss of signal, where the signal is not able to achieve the specified Bit Error Rate (BER), therefore throughput lower than an expected threshold, triggers RX_LOS. Signal deterioration at receiver and transmitter are monitored and acted upon through TX_FAULT and RX_LOS. The system of Gilliland and hitag discloses that in such situation, the signals with high error rate will not be utilized. However, Gilliland and

hitag is not explicit in issuing an error message (though error detection and management is further disclosed in sections E.3 and E.4 (page 54). Official notice is taken that it is well known in the art to issue an explicit error message upon encountering a fault, in order to indicate to the user and/or network administrator that the system is not performing as desired.

**4.2.3.** Regarding claim 13, the system of Gilliland and hitag discloses **wherein said communication link comprises a cable type** (communication link is a physical layer with identified types, for example copper or fiber connecting to the transponder/GBIC. Cable types are identified and reflected in Table D.1 of SFF-8053 standard)**, and wherein said passive transponder comprises a cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12)**, and wherein said cable type is encoded in said cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12)**, said computer readable program code further comprising a series of computer readable program steps to effect:**

**reading said cable type from said cable identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader),

**providing a signal comprising said cable type** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

4.2.4. Regarding claim 14, the system of Gilliland and hitag discloses **steps to effect detecting the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.2.5.** Regarding claim 15, the system of Gilliland and hitag discloses **wherein said communication link comprises a version number** (Table D.1 of page 44 of SFF_8053 standard, row 18)**, and wherein said passive transponder comprises a version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**, and wherein said version number is encoded in said version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**, said computer readable program code further comprising a series of computer readable program steps to effect:**

**reading said version number from said version identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader)**, and**

**providing a signal comprising said version number** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

4.2.6. Regarding claim 16, the system of Gilliland and hitag discloses **steps to effect detecting the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.3.** Regarding claim 17, Gilliland discloses **a computer program product usable with a programmable computer processor having computer readable program code embodied therein to provide a signal via a communication link** (GBIC link, Col. 1, lines 10- 60), **wherein said communication link includes a transponder** (GBIC transponder) **comprising a memory comprising information** (EEPROM, Col. 1, lines 48- 60), **comprising:**

**computer readable program code which causes said programmable computer processor to read said information from said memory** (information is accessed/read from EEPROM, as per GBIC specification, Col. 1, lines 48- 51)**; and**

**computer readable program code which causes said programmable computer processor to adjust the characteristics of said signal based upon said information** (by reading the specifications, Col. 1, lines 27- 30, the host system identifies the type of GBIC and adjust signals accordingly to accommodate various facilities/links, Col. 1, lines 10- 14).

Gilliland disclosure incorporates GBIC SFF-8053, GBIC Rev. 5.5 September 27, 2000, copy of which was provided by the applicant in the IDS of 9/29/2003. SFF-8053 further details the information/ tables outlining detailed information about the type of facilities, length, vendor, bit rates, etc. (see Appendix D. pages 43-52). For example, table D.1, Base ID fields indicating link length, vendor, and bit rate max and min.

Gilliland transponder (GBIC) though powered by the host (not including its own power source, and having passive circuitry as per SFF-8053, page 8, section 4.2) is not a **passive** transponder as defined by applicant (powered by RF source, page 6 of disclosure, lines 5-7).

However, hitag provides a **passive** transponder (powered by RF, page 2, col. 2, $1^{st}$ and $2^{nd}$ paragraphs), comprising an EEPROM memory (Page 2, Col. 1, General Description), where the reader and transponder are enabled to securely

communicate and identify each other (Page 2, Col. 2, 3rd paragraph), in a contactless fashion (Page 2, Col.2, Features).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland with hitag in order to replace the pin connectors (20 of them) of a GBIC with a contactless, easy to connect, contactless interface.

4.3.1. Regarding claim 18, Gilliland discloses **wherein said communication link** (connection to host system reader) **is interconnected to communication link control card** (communication link connecting to the host system via GBIC) **comprising a reading device** (in host system, Col. 1, lines 27-30) **such that said reading device is capable of reading said information from said memory** (EEPROM memory, Col. 1, lines 48- 51).

**4.3.2.** Regarding claim 20, the system of Gilliland and hitag discloses (Section 5.1 of SFF-8053 specification, page 11) **wherein said signal comprises an actual throughput rate and wherein said communication link comprises a nominal throughput rate, and wherein said passive**

**transponder comprises a throughput data field, and wherein said nominal throughput rate is encoded in said throughput data field** (as shown in Table D.1, 6th row, Page 44 of the SFF-8053 specification)**, further comprising:**

**computer readable program code which causes said programmable computer processor to read said nominal throughput rate from said throughput data field** (the fields are encoded on the EEPROM and read by the host reader)**;**

**computer readable program code which causes said programmable computer processor to determine if said nominal throughput rate is greater than or equal to said actual throughput rate** (error detection process as described next)**;**

**computer readable program code which, if said nominal throughput rate is not greater than or equal to said actual throughput rate, causes said programmable computer processor to generate an error message**. As disclosed in section 5.1 the transponder (GBIC) is driven from the host board with signals TX_DAT. The output from transponder (GBIC) to the host board is designated as RX_DAT. Any loss of signal, where the signal is not able to achieve the specified Bit Error Rate (BER), therefore throughput lower than an expected threshold, triggers RX_LOS. Signal deterioration at receiver and transmitter are monitored and acted upon through TX_FAULT and RX_LOS. The system of Gilliland and

hitag discloses that in such situation, the signals with high error rate will not be utilized. However, Gilliland and hitag is not explicit in issuing an error message (though error detection and management is further disclosed in sections E.3 and E.4 (page 54). Official notice is taken that it is well known in the art to issue an explicit error message upon encountering a fault, in order to indicate to the user and/or network administrator that the system is not performing as desired.

**4.3.3.** Regarding claim 21, the system of Gilliland and hitag discloses **wherein said communication link comprises a cable type** (communication link is a physical layer with identified types, for example copper or fiber connecting to the transponder/GBIC. Cable types are identified and reflected in Table D.1 of SFF-8053 standard)**, and wherein said passive transponder comprises a cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12)**, and wherein said cable type is encoded in said cable identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, rows 8-12)**, further comprising:**

**computer readable program code which causes said programmable computer processor to read said cable type from said**

**cable identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader),

**computer readable program code which causes said programmable computer processor to provide a signal comprising said cable type** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

4.3.4. Regarding claim 22, the system of Gilliland and hitag discloses **computer readable program code which causes said programmable computer processor to detect the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.3.5.** Regarding claim 23, the system of Gilliland and hitag discloses **wherein said communication link comprises a version number** (Table D.1 of page 44 of SFF_8053 standard, row 18)**, and wherein said passive transponder comprises a version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**, and wherein said version number is encoded in said version identifier data field** (stored in EEPROM as per Table D.1 of page 44 of SFF_8053 standard, row 18)**, further comprising:**

**computer readable program code which causes said programmable computer processor to read said version number from**

**said version identifier data field** (the data on EEPROM is read upon communication of transponder and the host reader)**, and**

**computer readable program code which causes said programmable computer processor to provide a signal comprising said version number** (as described in claim 1, the signal characteristics are adjusted according to the data reflected in the EEPROM).

4.3.6. Regarding claim 24, the system of Gilliland and hitag discloses **computer readable program code which causes said programmable computer processor to detect the interconnection of said communication link to said communication link control card** (Gilliland: Col. 1, lines 28- 30).

**4.4.** Regarding claim 25, Gilliland discloses **a data storage and retrieval system** (Gilliland discloses Giga bit interface connection, such as Fiber channel, which is connecting multiple devices. Data storage devices in Storage Area Networks (SAN) qualify as such. AN example of such a network is offered in Fig. 8a), **comprising:**

**a device adapter comprising a first communication link control card** (Host controller 63) **comprising a first reading device** (Host controller 63 reads GBIC memories using bus 66)**;**

**one or more information storage devices** (Connections 15)**;**

**a communication link comprising a length** (communication links connecting to GBICs connected to the host controller 63 via bus 66) **and a transponder** (GBIC 1, 2. and 3)**, wherein said transponder includes a memory comprising information** (GBIC has an EEPROM containing connection specification information as per SFF-8053, Annex D; Also see Gilliland Col. 1, lines 10- 60)**;**

**wherein said communication link interconnects said first communication link control card and one or more of said one or more information storage devices, such that said first reading device can read said information from said memory** (as shown in Fig. 8a, Host controller 63 reads GBIC memories via bus 76).

Gilliland disclosure incorporates GBIC SFF-8053, GBIC Rev. 5.5 September 27, 2000, copy of which was provided by the applicant in the IDS of 9/29/2003. SFF-8053 further details the information/ tables outlining detailed information about the type of facilities, length, vendor, bit rates, etc. (see Appendix D. pages 43-52). For example, table D.1, Base ID fields indicating link length, vendor, and bit rate max and min.

Gilliland transponder (GBIC) though powered by the host (not including its own power source, and having passive circuitry as per SFF-8053, page 8, section 4.2) is not a **passive** transponder as defined by applicant (powered by RF source, page 6 of disclosure, lines 5-7).

However, hitag provides a **passive** transponder (powered by RF, page 2, col. 2, 1st and 2nd paragraphs), comprising an EEPROM memory (Page 2, Col. 1, General Description), where the reader and transponder are enabled to securely communicate and identify each other (Page 2, Col. 2, 3rd paragraph), in a contactless fashion (Page 2, Col.2, Features).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland with hitag in order to replace the pin connectors (20 of them) of a GBIC with a contactless, easy to connect, contactless interface.

4.4.1. Regarding claim 26, the system of Gilliland and hitag discloses:

> **a second communication link control card comprising a second reading device, wherein said second communication link control card is interconnected to one or more of said one or more information storage devices** (Gilliland's Fig. 8a shows one Host controller 63. However,

official notice is taken that host system 79 can accept more than one controller. For example, a PC with a PCI bus can accept multiple network cards);

**wherein said communication link interconnects said first communication link control card and said second communication link control card, such that either said first reading device or said second reading device can read said information from said memory**, therefore, multiple host controllers are enabled to connect and read multiple GBICs using $I^2$ $C^{TM}$ bus, thereby allowing simultaneous access to multiple storage devices.

4.4.2. Regarding claim 27, the system of Gilliland and hitag discloses **wherein said passive transponder comprises a length data field, and wherein said length is encoded in said length data field** (SFF 8253, Table D.1, rows 8-12, show cable length data fields which are encoded in the EEPROM module of the transponder).

4.4.3. Regarding claim 28, the system of Gilliland and hitag discloses **wherein said communication link comprises a fiber channel communication link** (GBIC provides connectivity for fiber channel per Gilliland Col. 1, lines

10-13), **and wherein said passive transponder comprises a cable-type data field** (per SFF 8253, Annex D, e.g. Table D.1), **and wherein said cable-type data field indicates that said communication link comprises a fiber channel communication link** (as shown in Table D.1 rows 8-12, and row 6).

4.4.4. Regarding claim 29, the system of Gilliland and hitag discloses **wherein said communication link further comprises a nominal throughput rate** (Table D.1, row 6), **and wherein said passive transponder comprises a throughput data field, and wherein said nominal throughput rate is encoded in said throughput data field** (Table D.1, row 6 is encoded on the EEPROM memory module).

4.4.5. Regarding claim 30 the system of Gilliland and hitag discloses **wherein said communication link further comprises a cable version number** (Table D.1, row 18), **and wherein said passive transponder comprises a version data field, and wherein said version number is encoded in said version data field**(Table D.1, row 18 is encoded on the EEPROM memory module).

5. Claims 3, 11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland, in view of hitag, in further view of D.R. Cecchi et al., USPN 6,466,626 (hereinafter "Cecchi").

**5.1.** Regarding claim 3, the system of Gilliland and hitag discloses **wherein said communication link comprises a length** (SFF-8053, Table D.1, link lengths supported, 8 through 12th rows in the table, as disclosed by Gilliland's Col. 1, lines 20-25), **and wherein said passive transponder comprises a length data field** (the data field as reflected in Table D.1 is stored in EEPROM and read from the memory by the host reader); **further comprising the steps of:**

**encoding said length in said length data field** (data fileds as shown in Table D.1 are encoded in EEPROM);

**reading said length from said length data field** (as discussed for claim 1, the data is read from the EEPROM by the host reader);

**adjusting the** characteristics **of said signal based upon said length** (as different lengths require different signaling, as disclosed by Gilliland, Col. 1, lines 27-31 and 44- 47, the signal is adjusted accordingly)..

The system of Gilliland and hitag is not explicit in disclosing adjusting **pre-emphasis** of the signal.

However, Cecchi discloses adjusting **pre-emphasis** of the signal based on cable characteristics, such as length, in order to compensate and account for attenuation and signal degradation on a cable (see abstract, Col. 2, lines 43- 67).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland and hitag with Cecchi's invention, in order to adjust signal characteristics, through pre-emphasis, to account for signal attenuation due to cable length.

**5.2.** Regarding claim 11, the system of Gilliland and hitag discloses **wherein said communication link comprises a length** (SFF-8053, Table D.1, link lengths supported, 8 through 12$^{th}$ rows in the table, as disclosed by Gilliland's Col. 1, lines 20-25)**, and wherein said passive transponder comprises a length data field** (the data field as reflected in Table D.1 is stored in EEPROM and read from the memory by the host reader)**, and wherein said length is encoded in said length data field** (data fields as shown in Table D.1 are encoded in EEPROM)**, said computer readable program code further comprising a series of computer readable program steps to effect**:

**reading said length from said length data field** (as discussed for claim 1, the data is read from the EEPROM by the host reader)**;**

**adjusting the** characteristics **of said signal based upon said length** (as different lengths require different signaling, as disclosed by Gilliland, Col. 1, lines 27-31 and 44- 47, the signal is adjusted accordingly).

The system of Gilliland and hitag is not explicit in disclosing adjusting **pre-emphasis** of the signal.

However, Cecchi discloses adjusting **pre-emphasis** of the signal based on cable characteristics, such as length, in order to compensate and account for attenuation and signal degradation on a cable (see abstract, Col. 2, lines 43- 67).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland and hitag with Cecchi's invention, in order to adjust signal characteristics, through pre-emphasis, to account for signal attenuation due to cable length.

**5.3.** Regarding claim 19, the system of Gilliland and hitag discloses **wherein said communication link comprises a length** (SFF-8053, Table D.1, link lengths supported, 8 through $12^{th}$ rows in the table, as disclosed by Gilliland's Col. 1, lines 20-25), **and wherein said passive transponder comprises a length data field** (the data field as reflected in Table D.1 is stored in EEPROM and read

from the memory by the host reader), **and wherein said length is encoded in said length data field** (data fields as shown in Table D.1 are encoded in EEPROM) **further comprising:**

**computer readable program code which causes said programmable computer processor to read said length from said length data field** (as discussed for claim 1, the data is read from the EEPROM by the host reader);

**computer readable program code which causes said programmable computer processor to adjust the** characteristics **of said signal based upon said length** (as different lengths require different signaling, as disclosed by Gilliland, Col. 1, lines 27-31 and 44- 47, the signal is adjusted accordingly).

The system of Gilliland and hitag is not explicit in disclosing adjusting **pre-emphasis** of the signal.

However, Cecchi discloses adjusting **pre-emphasis** of the signal based on cable characteristics, such as length, in order to compensate and account for attenuation and signal degradation on a cable (see abstract, Col. 2, lines 43- 67).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Gilliland and hitag with Cecchi's invention, in order to adjust signal characteristics, through pre-emphasis, to account for signal attenuation due to cable length.

**_Contacts_**

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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